

I. In the Claims:

1. (Currently Amended) A An SCM signal code modulator, comprising:

an input interface for receiving one or more time-discrete samples of a signal; and

a an SCM signal code modulation Mapper circuit that converts the aggregate of the one or more time-discrete samples to analog and digital output symbols representing a mix of analog and digital values, wherein said analog output symbols represent amplitude values of a selected subspace of a stretched transformation of said aggregated ^{one or more time discrete samples} ~~input signals~~ and said digital output symbols represent an indication of the subspaces chosen in the stretched transformation.

2. (Currently Amended) The SCM signal code modulator of Claim 1, wherein said

SCM signal code modulation Mapper circuit further comprises a stretching transformation circuit for mapping the one or more of said signal samples onto a transformed signal space represented by an aggregate of one or more transformed signal samples ~~signals~~ and a subspace slicer that selects one or more subspaces from said transformed signal space and outputs said mix of analog and digital symbols based on the selecting ^{ed} ₁ subspace and the ^{one or more} ₁ transformed signal samples.

3. (Currently Amended) The SCM signal code modulator of Claim 1 further comprising means for forward error correcting said digital output symbols before transmission.

4.(Currently Amended) The SCM signal code modulator of claim 2, wherein said stretching transformation circuit further comprises a linear expansion circuit for linearly expanding the sample signals in one or more dimensions ~~of said input signals space~~.

5. (Currently Amended) The SCM signal code modulator of claim 2, wherein said stretching transformation circuit further comprises a non-linear expansion circuit that transforms a quarter-circle sub space onto a full circle transformed signal space.

6. (Currently Amended) The SCM signal code modulator of claim 2, wherein said stretching transformation circuit further comprises conformal mapping.

7. (Currently Amended) The SCM signal code modulator of claim 1 further comprising a multiplexer for multiplexing the analog and digital symbols for transmission over a common communications channel.

8. (Currently Amended) The SCM signal code modulator of claim 7, further comprising a an SCM signal code modulation Mapper comprising means for pairing said multiplexed symbols and a quadrature amplitude modulator for quadrature amplitude modulating each pair of signals to generate QAM signals.

9. (Currently Amended) The SCM signal code modulator of Claim 8, wherein each of the QAM signals comprise analog symbols or digital symbols as originated from the output of said SCM signal code modulation Mapper.

10. (Currently Amended) The SCM signal code modulator of Claim 9, wherein the QAM signals comprise a mix of both analog and digital symbols as originated from the output of said SCM signal code modulation Mapper.